

THE ROLE OF INDUSTRY AND UNIVERSITY PARTNERSHIPS IN DEVELOPING SIGNIFICANT LEARNING OUTCOMES RELATED TO BUSINESS CONCEPTS

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ABSTRACT

In this study, students of an undergraduate business course were introduced to industry partners via teleconferencing methods. The students were assigned to groups during the semester and each group had an industry partner that assisted in the learning process. The six dimensions of Fink's integrated course design were examined in order to determine if the students perceived they had gained foundational, emotional, and interpersonal aspects of significant learning. A web-based survey was created and used to begin collecting data on student perceptions of learning. The course was designed for ongoing data collection with analysis anticipated in the subsequent semester.

Introduction

The signature steps of *significant learning* are foundational knowledge, application, integration, human dimension, caring, and learning how to learn (Fink, 2007). The interdependency of the components reveals the post course applications and continued learning as shown in continued expressions of inquiry discovery, and reflection (Oblinger, 2012). It is in the post course era that we see continued learning and exploration.

The motivation for this study was to examine business student perceptions of significant learning in a project-driven course. Questions that helped to guide the research process were the following: (1) Do industry partners facilitate the learning process? (2) Does connecting students with industry partners assist in learning how to solve practical business problems? (3) Does the team-based structure of the course enhance networking and relationship-building between the students and industry partners? The six

dimensions of Fink's integrated course design were examined within an undergraduate business course (Fink, 2003). The course was analyzed by administering student surveys at the end of the semester.

An important part of this study was the consideration of the role of industry partners with student learning outcomes. As firms rely upon universities to support them in significant learning, one method for enhancing significant learning for both parties is developing exercises that enhance learning. Cope and Watts (2000) found learning is significant for firms that experience critical incidents for individuals within organizations.

Another key area was the consideration of team-based structures in student engagement and the learning process. Significant learning by definition seeks to move the student from foundational knowledge to a situation of learning to learn. Infused in this are cooperative engagements of application, integration, human dimen-

sion, and caring. There are several strategies to arrive at significant learning. One is to use small group work as a strategy to transfer and create knowledge. Small group work traditionally is organized along three veins – casual use, cooperative learning, and team-based learning (Fink, 2004). Each focus has benefits and when used consistently can lead to positive course outcomes as well as lead to significant learning. The largest benefit of casual use is in reinforcement of foundational knowledge and movement toward its application. Cooperative learning offers opportunities to integrate foundational knowledge with life activities and other course work. Team-based learning combines elements of the other small group styles and instills a desire for continued learning through innovative applications and perspective broadening. Team-based learning reaches the pinnacle of significant learning by integrating its signature six types of learning into social, technical, and intellectual interactions (Oblinger, 2012).

LITERATURE REVIEW

Background

According to the traditional view of student learning, foundational knowledge and higher order levels of learning needed to be attained in hierarchical form (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). Approaches to the learning process have expanded over time to include emotional and non-hierarchical components that considered the importance of life-long learning (Robinson, 2009). One of the contemporary approaches to learning is found within Fink's taxonomy of learning which makes integrated course design a focal point within the learning process. According to Fink (2003), significant learning occurs only when students are enthusiastic and the class displays high energy levels. The result is a significant and lasting change in student learning. Fink's integrated course design assures that all six significant learning objectives are included throughout the course. The design process is organized around three key phases with twelve individual steps: the first phase includes identifying important situational factors, formulating significant learning goals, formulating feedback and assessment procedures, generating teaching and learning activities, and evaluating integration of the component parts; the second phase includes creating a course structure, selecting an effective teaching strategy, and creating the overall scheme of learning activities; finally, the third phase includes assembling the grading system, identifying what might go wrong, writing the syllabus, and planning the course and teaching evaluation system (Fink, 2003).

Fink's Taxonomy

Fink's (2003) taxonomy of significant learning includes the following six categories which are used for integrated course design:

1. *Foundational knowledge contains the principles, concepts, and basic course information.* this knowledge provides the base for understanding other forms of learning.
2. *Application* involves applying knowledge by developing skills and engaging in critical, creative, and practical thought processes.
3. *Integration* consists of understanding the connections between ideas, people, and different aspects of interdisciplinary learning and life.
4. *Human dimension* contains learning that occurs when students gain new insights about themselves and others.
5. *Caring* involves the change and development of new feelings, interests, or values toward something that students now regard as more important.
6. *Learning how to learn* transpires when students embrace the process of learning and become increasingly effective in future learning efforts.

INDUSTRY PARTNERSHIPS AND TEAM BASED LEARNING

As businesses focus on adapting to volatile environments, they rely upon their supply chains to develop value for customers to sustain a competitive advantage (Mentzer, Flint, & Hult, 2001). Some researchers have proposed that a firm's ability to learn in functional areas such as logistics can provide a sustainable competitive advantage. As businesses develop their learning capabilities within the supply chain, they look to relationships with partner organizations (Esper, Fugate, & Davis-Sramek, 2007).

The beauty of *team based learning* is that it incorporates a healthy dose of individual work, teamwork and immediate feedback (Parmelee, Michaelsen, Cook, & Hude, 2012). These skills help to equip a high touch generation of learners with strategies to better engage them in the workplace. Industry partner feedback to colleges echoes the need for new employees to have a solid technical skill set but also have critical thinking and interpersonal skills (Fink, 2004). Small group learning, particularly team-based learning when done correctly, accomplishes this task.

Immediate feedback is a strong component of team-based learning and a significant piece of the learning outcome. Immediate feedback allows the small group the chance to reflect on strong and developmental points, receive the immediate attention that current collegians expect and give the group time to pass kudos to the high achieving team members. This instructional strategy and feedback cultivates high performance learning teams. Feedback by itself is not a novel diagnostic tool. It is the immediacy of the feedback that lends itself to meaningful corrective action, integration, and caring. In short, immediate feedback promotes relevancy versus 'what grade did I get' syndrome.

Michaelsen (2004) identifies four keys for successful team-based learning 1) strategic team membership and management, 2) team member accountability for all work, 3) group activities that promote team bonding and knowledge transfer, & 4) immediate feedback. Regarding team work, Haller, Gallagher, Weldon, & Felder (2000) remind instructors to make the group work meaningful and worthwhile to elicit positive interactions among members and minimize conflict. Team members are more than capable of quickly identifying the contributions of their members. Allow them this opportunity as well as the chance to self correct deficient group member behavior. Active learning as demonstrated in team-based learning can lead to increased student success and retention (Bain, Downen, Morgan, & Ott, 2012).

Team-based learning as an application of significant learning has renderings of Bloom's taxonomy and Maslow's hierarchy of needs theory. Like Bloom's taxonomy significant learning is based on six categories. The largest difference is that Bloom's taxonomy is based on a hierarchical structure whereas significant learning is interactive (Fink, 2007). One could argue that significant learning is 'mostly' interactive assuming the premise of foundational knowledge has been completed. Parmelee et al. (2012) suggest that team-based learning differs from other small group formations in its insistence that members come prepared for the group activities. This preparedness can be rooted in foundational knowledge and application.

The largest deliverable of team-based learning relative to significant learning rests in its intrinsic applications of caring, human dimension, and learning how to learn. In large respect, these elements are akin to the higher rungs in Maslow's theory related to esteem, belonging, and self-actualization as well as Hertzberg's two factor theory which dwells on workplace/team satisfaction and one's motivation to perform.

DISCUSSION

Significant learning became an area of focus within an upper-level business course during the fall semester of 2011. Students were given a business research project to complete during the semester. A collaborative corporation (large transportation firm headquartered in the U.S.) assisted in the project by providing management employees who served as advisors to the students. These advisors became the industry partners for this study. The research project was team-based and consisted of five teams with five students per team. Each team was assigned an industry partner to assist in mentoring the team members. Three teleconferencing meetings (with some video imaging) between the teams and their respective industry partners were held during the semester.

The upper-level business course was comprised of mainly graduating seniors majoring in sales & marketing. Student perceptions of significant learning were anonymously assessed using a web-based survey that included the following five-point scale: 5 = Strongly Agree, 4 = Agree, 3 = Neither Agree/Disagree, 2 = Disagree and 1 = Strongly Disagree. A total of twelve students participated in the survey. Thirteen questions were utilized to measure perceptions of significant learning related to the business research project. In addition, one question allowed for student comments and three categorical questions were included to help in classification.

Findings

The six categories of significant learning were incorporated into the survey items and summarized by using percentages (see Table 1). Questions 1 and 11 were given to gauge student perceptions of foundational knowledge. The students mostly agreed that the business research project provided knowledge of the concepts. Questions 2 and 13 were given to gauge student perceptions of application. Like foundational knowledge, the students agreed that they could apply what they learned from the business research project. Questions 3, 4, and 12 were given to assess student perceptions of the human dimension. Responses to the human dimension of learning were not as favorable as the prior two categories. Questions 5 and 8 were given to assess student perceptions of caring. The students seemed least connected to the caring component of learning. Half of the responding students either disagreed or strongly disagreed with these two questions. Questions 6 and 10 were given to measure student perceptions of integration. Most of the responses were favorable regarding the integration component of learning. Questions 7 and 9 were given to measure student perceptions regarding

learning how to learn. The students seemed to agree that they learned how to learn by participating in the business research project. Question 9 was reversed due to the structure of the question and the last question allowed for comments from the students. Finally, in addition to the scaled responses mentioned above, a few anecdotal comments were provided by the students: a) the need for face-to-face communication with the industry partners; b) prior understanding of the collaborative corporation; c) more time to complete the business research project.

SUMMARY

In general, student perceptions were positive regarding the significant learning survey items

Students appeared to rate learning associated with *foundational knowledge* and *application* higher than *human dimension* and *caring* components. The students, in general, saw benefit in connecting with the industry partners to solve business problems. The industry partners were satisfied with the results of the research project and enjoyed the opportunity to interact with the students during the semester. Future research is needed to further examine the impact of industry partners on student learning outcomes and compare findings to other business courses.

TABLE 1 SURVEY ITEMS AND COURSE PERCENTAGES STUDENT PERCEPTIONS OF SIGNIFICANT LEARNING						
Survey Item	Category of Learning	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1	Foundational Knowledge	41.70%	50.00%	0.00%	8.30%	0.00%
11	Foundational Knowledge	8.30%	66.70%	25.00%	0.00%	0.00%
2	Application	50.00%	50.00%	0.00%	0.00%	0.00%
13	Application	25.00%	41.70%	16.70%	8.30%	8.30%
6	Integration	66.70%	16.70%	16.70%	0.00%	0.00%
10	Integration	33.30%	25.00%	25.00%	16.70%	0.00%
3	Human Dimension	33.30%	41.70%	25.00%	0.00%	0.00%
4	Human Dimension	8.30%	58.30%	25.00%	8.30%	0.00%
12	Human Dimension	0.00%	50.00%	16.70%	25.00%	8.30%
5	Caring	8.30%	25.00%	16.70%	25.00%	25.00%
8	Caring	8.30%	16.70%	25.00%	25.00%	25.00%
7	Learning How to Learn	8.30%	66.70%	16.70%	8.30%	0.00%
*9	Learning How to Learn	0.00%	8.30%	41.70%	41.70%	8.30%
*Survey Item #9 was reversed due to the structure of the question						
Classification: 75% Graduating Seniors; 25% Non-Graduating Seniors Gender: 50% Male; 50% Female Major: 91.7% Sales & Marketing; 8.3% Business Administration						

REFERENCES

Bain, C., Downen, T., Morgan, J., & Ott, W. (2012). Active learning in an introduction to business course. *Proceedings of the Academy of Educational Leadership*, 17(1), 3-6.

Bloom, B. S. (Ed.), Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive Domain*. New York: David McKay.

Cope, J., & Watts, G. (2000). Learning by doing: An exploration of experience, critical incidents and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behaviour & Research*, 6 (3), 104-124.

Esper, T. L., Fugate, B. S., & Davis-Sramek, B. (2007). Logistics learning capability: Sustaining the competitive advantage gained through logistics leverage. *Journal of Business Logistics*, 28 (2), 57-81.

Fink, L. D. (2007). The power of course design to increase student engagement and learning. *Peer Review* 9(1), 13-17.

Fink, L. D. (2004). Beyond small groups: Harnessing the extraordinary power of learning teams. In Michaelson, L.K., Knight, A., & Fink, L. D. (eds.) *Team-Based Learning: A Transformative Use of Small Groups in College Teaching*, p. 27-50. Sterling, VA: Stylus Publishing.

Fink, L. D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco: Jossey-Bass.

Haller, C.R., Gallagher, V.J., Weldon, R.L., & Felder, R.M. (2000). Dynamics of peer education in cooperative learning workgroups. *Journal of Engineering Education*, 89(3), 285-293.

Mentzer, J. T., Flint, D. J., & Hult, T. M. (2001). Logistics service quality as a segment-customized process. *Journal of Marketing*, 65 (4), 82-104.

Michaelson, L.K. (2004) Getting Started with Team-Based Learning. In Michaelson, L.K.,

Knight, A., & Fink, L. D. (eds.) *Team-Based Learning: A Transformative Use of Small Groups in College Teaching*, p. 27-50. Sterling, VA: Stylus Publishing.

Oblinger, D.G. (2012). IT as a game changer. *Educause Review*, 11-24.

Parmelee, D., Michaelson, L.K., Cook, S., & Hudes, P.D. (2012). Team-based learning: A practical guide: AMEE Guide no. 65, 34, e275-287.

Robinson, C. (2009). Lessons on learning. *Journal for Quality & Participation*, 32(1), 25-27.